Bioinformatics Core Support for the Frederick National Laboratory for Cancer Research and NCI

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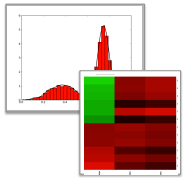
Exploring Experimental Options

- Exploration of new protocols
- Support for new technologies
- Custom training
- Bioinformatics consulting
- Establishing collaborations

Experimental Design



- Technology selection
- Feasibility analysis
- Statistical validation
- Study design
- Cost-saving recommendations
- Collaborations

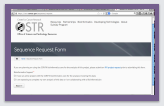
Visit http://ccrifx.cancer.gov to get started

Sequence Data Request

- Coordinated sequencing and analysis

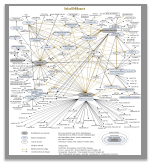
  Step 1: Submit analysis request at http://ccrifx.cancer.gov
  Step 2: Submit sequencing request
- Sequencing with self-analysis

  Step 1. Submit sequencing request
  Step 2. Coordinate with SF staff directly



Submit at https://ostr.cancer.gov/sequence/request

Hypothesis and Discovery



- Scientific insights
- Consulting on new techniques and emerging technologies
- Customized solutions
- In-house integration and annotation applications
- Guidance on future steps

ABCC bioinformatics efforts enable the NCI community by integrating community data, delivering key services, developing capabilities, building collaborations, and providing scientific consultation.

SAMPLE TO SCIENCE

Collaborations, Core and Infrastructure Enabling Cancer Research Advances

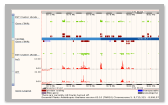
Experimentation

The SF and LMT sequencing facilities provide sequencing support for Illumina, Ion Torrent, Pacific Biosciences, Roche/454

- More than 50 labs served
- Over 1300 sample lanes run

http://ncifrederick.cancer.gov/atp/genetics-and-genomics/

Data Analysis



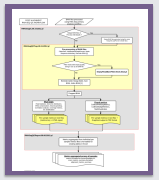
- Established NGS workflows
- ChIP-seq, RNA-seq, Exome-Seq
- Microarray analysis
- Data integration and pathway analysis
- Recognized scientific contributions in major journals
- CCRIFX analysis at no-cost to CCR investigators
- Collaborative analysis with over 200 scientists
- Over 100 projects completed

http://ccrifx.cancer.gov

Data Quality Management

CCRFX and CCR SF staff coordinate to assess data quality, deliver original data and get the most from your experimental investment.

- Robust QC workflows
- Online quality reports



Results Integration and Delivery

- Extended analysis with custom data integration
- Comparisons to existing datasets such as TCGA
- Custom, variation, impact and pedigree analysis
- Follow-up inquiries
- Publication support
- Custom visualizations
- Analysis data management

Visit http://isp.ncifcrf.gov/abcc for more information on these and other bioinformatics opportunities